

In the Claims

The listing of claims will replace all prior versions and listings of claims in the application.

Listings of claims

1. (original): A compound of the Formula I:

$$R^{4} \longrightarrow \begin{pmatrix} N = \\ N = \\ N = \\ R^{3} \end{pmatrix} \longrightarrow \begin{pmatrix} (R^{5})_{n} \\ A \\ L = \begin{pmatrix} R^{6})_{m} \\ B \end{pmatrix}$$

Formula I

wherein:

 ${f R}^1$ and ${f R}^2$ are independently selected from hydrogen, (1-6C)alkylsulfonyl, phenyl(CH₂)_u- wherein u is 0, 1, 2, 3, 4, 5 or 6, (1-6C)alkanoyl, (1-6C)alkyl, (1-6C)alkoxycarbonyl, (3-6C)cycloalkyl(CH₂)_x- in which x is 0, 1, 2, 3, 4, 5 or 6, or a 5 or 6 membered heteroaryl ring, or ${f R}^1$ and ${f R}^2$ together with the nitrogen atom to which they are attached represent a saturated or partially saturated 3 to 7 membered heterocyclic ring optionally containing another heteroatom selected from N or O;

wherein the (1-6C)alkyl, the (1-6C)alkanoyl and the (3-6C)cycloalkyl groups are optionally substituted by one or more groups independently selected from fluoro, hydroxy, (1-6C)alkyl, (1-6C)alkoxy, (1-6C)alkoxy(1-6C)alkoxy, (1-6C)alkoxy, (1-6C)alkoxy(1-6C)alkoxy, amino, mono(1-6C)alkylamino, di-[(1-6C)alkyl]amino, carbamoyl, mono(1-6C)alkylcarbamoyl, di-[(1-6C)alkyl]carbamoyl or—N(R^d)C(O)(1-6C)alkyl in which R^d is hydrogen or (1-6C)alkyl, or a saturated or partially saturated 3 to 7 membered heterocyclic ring, or a 5 or 6 membered heteroaryl ring,

wherein the (1-6C)alkoxy, (1-6C)alkoxy(1-6C)alkoxy and (1-6C)alkoxy(1-6C)alkoxy(1-6C)alkoxy groups and the (1-6C)alkyl groups of the mono(1-6C)alkylamino, di-[(1-6C)alkyl]amino, mono(1-6C)alkylcarbamoyl, di-[(1-6C)alkyl]carbamoyl and/or -N(R^d)C(O)(1-6C)alkyl groups are optionally substituted by one or more hydroxy groups;

wherein the phenyl is optionally substituted by one or more groups independently selected from halo, (1-6C)alkyl, (1-6C)alkoxy, amino, mono(1-6C)alkylamino or di-[(1-6C)alkyl]amino, wherein the (1-6C)alkyl and (1-6C)alkoxy groups are



optionally substituted by one or more groups independently selected from hydroxy, amino, mono(1-6C)alkylamino or di-[(1-6C)alkyl]amino; and wherein any heterocyclic and heteroaryl rings within R¹ and/or R² are optionally independently substituted by one or more of the following: (1-4C)alkyl, (1-4C)alkoxy, (1-4C)alkoxy(1-4C)alkyl, hydroxy, amino, mono(1-6C)alkylamino or di-[(1-6C)alkyl]amino, or a saturated or partially saturated 3 to 7 membered heterocyclic ring, or -C(O)(CH₂)_zY wherein z is 0,1, 2 or 3 and Y is selected from hydrogen, hydroxy, (1-4C)alkoxy, amino, mono(1-6C)alkylamino, di-[(1-6C)alkyl]amino or a saturated or partially saturated 3 to 7 membered heterocyclic ring; and provided that when R¹ and/or R² is a (1C)alkanoyl group, then the

R³ is selected from hydrogen, (1-6C)alkyl or (1-6C)alkoxy, (1-6C)alkoxy wherein the alkyl and the alkoxy groups are optionally substituted by one or more groups selected from: fluoro, hydroxy, (1-6C)alkyl, (1-6C)alkoxy, carbamoyl, mono(1-6C)alkylcarbamoyl or di-[(1-6C)alkyl]carbamoyl, amino, mono(1-6C)alkylamino or di(1-6C)alkylamino, a saturated or partially saturated 3 to 7 membered heterocyclic ring or a 5 or 6 membered heteroaryl ring wherein said heterocyclic and heteroaryl rings are optionally independently substituted by one or more of the following: (1-4C)alkyl, (1-4C)alkoxy,hydroxy, amino, mono(1-6C)alkylamino or di(1-6C)alkylamino or a saturated or partially saturated 3 to 7 membered heterocyclic ring;

or R³ represents a group -NR¹R² as defined above;

R⁴ is selected from hydrogen, (1-6C)alkyl or (1-6C)alkoxy;

(1C)alkanoyl is not substituted by fluoro or hydroxy;

A represents an aryl group or a 5 or 6 membered heteroaryl ring selected from furyl, pyrrolyl, thienyl, oxazolyl, isoxazolyl, imidazolyl, pyrazolyl, thiazolyl, isothiazolyl, oxadiazolyl, thiadiazolyl, triazolyl, tetrazolyl, pyridyl, pyridazinyl, pyrimidinyl, pyrazinyl or 1,3,5-triazinyl;

R⁵ is selected from cyclopropyl, cyano, halo, (1-6C)alkoxy or (1-6C)alkyl, wherein the (1-6C)alkyl and the (1-6C)alkoxy groups are optionally substituted by cyano or by one or more fluoro;



n is 0, 1, 2 or 3;

- L is attached meta or para on ring A with respect to the point of attachment of the ethynyl group and represents -C(R^aR^b)C(O)N(R⁹)-, -N(R⁸)C(O)C(R^aR^b)-, -N(R⁸)C(O)N(R⁹)-, -N(R⁸)C(O) O-, or -OC(O) -N(R⁹)-, wherein R⁸ and R⁹ independently represent hydrogen or (1-6C)alkyl and wherein R^a and R^b independently represent hydrogen or (1-6C)alkyl or R^a and R^b together with the carbon atom to which they are attached represent (3-6C)cycloalkyl;
- **B** represents a (3-7C)cycloalkyl ring, a saturated or partially saturated 3 to 7 membered heterocyclic ring, an aryl group, a 5 or 6 membered heterocaryl ring selected from furyl, pyrrolyl, thienyl, oxazolyl, isoxazolyl, imidazolyl, pyrazolyl, thiazolyl, isothiazolyl, oxadiazolyl, thiadiazolyl, triazolyl, tetrazolyl, pyridyl, pyridazinyl, pyrimidinyl, pyrazinyl or 1,3,5-triazinyl, or a 8, 9 or 10 membered bicyclic group which optionally contains 1, 2, 3 or 4 heterocatoms independently selected from N, O and S and which is saturated, partially saturated or aromatic;
- R⁶ is selected from halo, cyano, oxo, a (3-7C)cycloalkyl ring, a saturated or partially saturated 3 to 7 membered heterocyclic ring -S(O)_p-(1-6C)alkyl wherein p is 0, 1 or 2, -N(R^a)C(O)(1-6C)alkyl in which R^a is hydrogen or (1-6C)alkyl; or
- R⁶ is selected from (1-6C)alkyl or (1-6C)alkoxy, wherein the (1-6C)alkyl, -S(O)_p-(1-6C)alkyl and the (1-6C)alkoxy groups are optionally substituted by one or more groups independently selected from cyano, fluoro, hydroxy, (1-6C)alkoxy, amino, mono(1-6C)alkylamino, di-[(1-6C)alkyl]amino, a (3-7C)cycloalkyl ring or a saturated or partially saturated 3 to 7 membered heterocyclic ring;
 - wherein the (3-7C)cycloalkyl ring and saturated or partially saturated 3 to 7 membered heterocyclic ring are optionally independently substituted by one or more groups selected from (1-6C)alkyl; and

m is 0, 1, 2 or 3;

and when B is a (3-7C)cycloalkyl ring or a saturated or partially saturated 3 to 7 membered heterocyclic ring or a saturated or partially saturated 8, 9 or 10 membered bicyclic group, the rings and bicyclic group optionally bear 1 or 2 oxo or thioxo substituents;

and salts thereof.



- 2. (original): A compound of Formula I according to Claim 1, wherein:
 - R⁶ is selected from halo, cyano, a (3-7C)cycloalkyl ring, a saturated or partially saturated 3 to 7 membered heterocyclic ring or an alkanoylamino group -N(R^c)C(O)(1-6C)alkyl in which R^c is hydrogen or (1-6C)alkyl; or R⁶ is selected from (1-6C)alkyl or (1-6C)alkoxy, wherein the (1-6C)alkyl and the (1-6C)alkoxy groups are optionally substituted by one or more groups independently selected from cyano, fluoro, hydroxy, (1-6C)alkoxy, amino, mono(1-6C)alkylamino, di-[(1-6C)alkyl]amino, a (3-7C)cycloalkyl ring or a saturated or partially saturated 3 to 7 membered heterocyclic ring;

and salts thereof.

- 3. (original): A compound of the Formula I according to claim 1, wherein R¹ and R² are independently selected from hydrogen, (1-6C)alkylsulfonyl, phenyl(CH₂)u- wherein u is 0, 1, 2, 3, 4, 5 or 6, (1-6C)alkanoyl, (1-6C)alkyl, (1-6C)alkoxycarbonyl, or (3-6C)cycloalkyl(CH₂)x- in which x is 0, 1, 2, 3, 4, 5 or 6, or R¹ and R² together with the nitrogen atom to which they are attached represent a saturated or partially saturated 3 to 7 membered heterocyclic ring optionally containing another heteroatom selected from N or O;
 - wherein the alkyl and the cycloalkyl groups are optionally substituted by one or more groups selected from fluoro, hydroxy, (1-6C)alkyl, (1-6C)alkoxy, amino, mono(1-6C)alkylamino or di-[(1-6C)alkyl]amino, a saturated or partially saturated 3 to 7 membered heterocyclic ring or a 5 or 6 membered heteroaryl ring, wherein said heterocyclic and heteroaryl rings are optionally independently substituted by one or more of the following: (1-4C)alkyl, hydroxy, amino, mono(1-6C)alkylamino or di-[(1-6C)alkyl]amino or a saturated or partially saturated 3 to 7 membered heterocyclic ring;
 - and wherein the phenyl is optionally substituted by one or more groups selected from halo, (1-6C)alkyl, (1-6C)alkoxy, amino, mono(1-6C)alkylamino or di-[(1-6C)alkyl]amino, wherein the (1-6C)alkyl or (1-6C)alkoxy are optionally substituted by hydroxy, amino, mono(1-6C)alkylamino or di-[(1-6C)alkyl]amino;
 - R³ is selected from hydrogen, (1-6C)alkyl or (1-6C)alkoxy, wherein the alkyl and the alkoxy groups are optionally substituted by one or more groups selected from fluoro, hydroxy, (1-6C)alkyl, (1-6C)alkoxy, amino, mono(1-6C)alkylamino or



di-[(1-6C)alkyl]amino, a saturated or partially saturated 3 to 7 membered heterocyclic ring or a 5 or 6 membered heteroaryl ring, wherein said heterocyclic and heteroaryl rings are optionally independently substituted by one or more of the following: (1-4C)alkyl, hydroxy, amino, mono(1-6C)alkylamino or di-[(1-6C)alkyl]amino or a saturated or partially saturated 3 to 7 membered heterocyclic ring;

or R³ represents a group -NR¹R² as defined above;

R⁴ is selected from hydrogen, (1-6C)alkyl or (1-6C)alkoxy;

A represents an aryl group or a 5 or 6 membered heteroaryl ring selected from furyl, pyrrolyl, thienyl, oxazolyl, isoxazolyl, imidazolyl, pyrazolyl, thiazolyl, isothiazolyl, oxadiazolyl, thiadiazolyl, triazolyl, tetrazolyl, pyridyl, pyridazinyl, pyrimidinyl, pyrazinyl or 1,3,5-triazinyl;

R⁵ is selected from cyano, halo, (1-6C)alkoxy or (1-6C)alkyl optionally substituted by cyano or by one or more fluoro;

n is 0, 1, 2 or 3;

- L is attached meta or para on ring A with respect to the point of attachment of the ethynyl group and represents -C(RaRb)C(O)N(R9)-, -N(RB)C(O)C(RRBb)-, -N(RB)C(O)N(R9)-, -N(RB)C(O)O-, or -OC(O) N(R9)-, wherein RB and R9 independently represent hydrogen or (1-6C)alkyl and wherein RB and RB independently represent hydrogen or (1-6C)alkyl or RB and RB together with the carbon atom to which they are attached represent (3-6C)cycloalkyl;
- **B** represents a (3-7C)cycloalkyl ring, an aryl group or a 5 or 6 membered heteroaryl ring selected from furyl, pyrrolyl, thienyl, oxazolyl, isoxazolyl, imidazolyl, pyrazolyl, thiazolyl, isothiazolyl, oxadiazolyl, thiadiazolyl, triazolyl, tetrazolyl, pyridyl, pyridazinyl, pyrimidinyl, pyrazinyl or 1,3,5-triazinyl;
- R⁶ is selected from halo, cyano, a saturated or partially saturated 3 to 7 membered heterocyclic ring or an alkanoylamino group -N(R^a)C(O)(1-6C)alkyl in which R^a is hydrogen or (1-6C)alkyl; or R⁶ is selected from (1-6C)alkyl or (1-6C)alkoxy, wherein the alkyl and the alkoxy groups are optionally substituted by one or more groups



selected from cyano, fluoro, hydroxy, (1-6C)alkoxy, amino, mono(1-6C)alkylamino, di-[(1-6C)alkyl]amino, or a saturated or partially saturated 3 to 7 membered heterocyclic ring; and

m is 0, 1, 2 or 3;

and when m is at least 2 then two substituents on adjacent carbon atoms in ring B may together represent a methylenedioxy group;

and salts thereof.

- 4. (currently amended): A compound according to any one of Claims 1, 2 and 3 wherein A is selected from phenyl, pyridyl, thiazolyl, thiadiazolyl or pyrimidinyl.
- 5. (currently amended): A compound accordingly to any one of the preceding claims 1 wherein B is selected from phenyl, 2,3-di-hydro-indenyl, piperidinyl, pyridyl, pyrazolyl, isothiazolyl, thiadiazolyl, isoxazolyl, benzodioxinyl, benzodioxolyl or tetrahydropyranyl
- 6. (currently amended): A compound accordingly to any one of the preceding claims 1 wherein L is selected from -N(R⁸)C(O)N(R⁹)-, -N(R⁸)C(O)O- or -N(R⁸)C(O)CH₂- wherein R⁸ and R⁹ independently represent hydrogen or (1-6C)alkyl.
- 7. (currently amended): A compound accordingly to any one of the preceding claims $\underline{1}$ wherein R^1 and R^2 are both hydrogen or R^1 is hydrogen or (1-6C)alkyl and R^2 is (1-6C)alkyl
 - wherein (1-6Calkyl) is optionally substituted by hydroxy, amino, mono(1-6C)alkylamino or di(1-6C)alkylamino, carbamoyl, (1-6C)alkoxy, (1-6C)alkoxy(1-6C)alkoxy, -N(Rd)C(O)(1-6C)alkyl in which Rd is hydrogen or (1-6C)alkyl, aryl (particularily phenyl), a saturated or partially saturated 3 to 7 membered heterocyclic ring or a 5 or 6 membered heteroaryl ring;
 - wherein the (1-6C)alkoxy, mono(1-6C)alkylamino and -N(R^d)C(O)(1-6C)alkyl groups are optionally substituted by hydroxy; and
 - wherein an aryl ring, a saturated or partially saturated 3 to 7 membered heterocyclic ring or a 5 or 6 membered heteroaryl ring is optionally substituted by (1-4C)alkyl, (1-4C)alkoxy or -C(O)CH₂Y wherein Y is selected from hydroxy or di(1-6C)alkylamino.

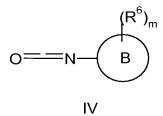


- 8. (currently amended): A compound accordingly to any one of the preceding claims $\underline{1}$ wherein R^3 and R^4 are both hydrogen.
- 9. (currently amended): A compound accordingly to any one of the preceding claims 1 wherein R⁶ is independently selected from halo, cyano, oxo, (3-7C)cycloalkyl, a saturated 3 to 7 membered heterocyclic ring (optionally substituted by (1-4C)alkyl), -N(R^c)C(O)(1-6C)alkyl wherein R^c is hydrogen or (1-6C)alkyl (particularily (1-4C)alkyl), (1-6C)alkyl (optionally substituted by halo) or (1-6C)alkoxy and m is selected from 1 or 2.
- (original): A compound according to Claim 1 which is any one or more of examples 1 to 51 or a salt thereof.
- 11. (currently amended): A pharmaceutical composition which comprises a compound of the Formula I, or a pharmaceutically acceptable salt thereof, as defined in any one of claims 1 to 10 in association with a pharmaceutically acceptable diluent or carrier.
- 12. (canceled)
- 13. (canceled)
- 14. (canceled)
- 15. (original): A process for preparing a compound of formula I, as defined in Claim 1, or a pharmaceutically acceptable salt thereof (wherein R¹, R², R³, R⁴, R⁵, R⁶, R⁷, R⁸, R⁹, R¹⁰, R¹¹ L, ring A and ring B, n and m are, unless otherwise specified, as defined in Claim 1) comprising:
 - (a) For compounds of the formula I wherein L is -N(R⁸)C(O)N(H)-, the reaction of a compound of the formula II:

$$R^{4} \longrightarrow N = \begin{pmatrix} NR^{1}R^{2} & (R^{5})_{n} \\ & & & \\ N \longrightarrow R^{3} & & \\ & & & \\ & & & \\ R^{3} & & \\ & & &$$



wherein R¹, R², R³, R⁴, R⁵, R⁸, n and A have any of the meanings defined hereinbefore except that any functional group is protected if necessary, with an isocyanate of the formula IV:



wherein R⁶, m and B have any of the meanings defined hereinbefore except that any functional group is protected if necessary; or

(b) For compounds of the formula I wherein L is -N(R⁸)C(O)N(H)-, the reaction of a compound of the formula II as defined above with an aryl carbamate of the formula III:

$$Ar \underbrace{O \qquad \qquad (R^6)_m}_{M}$$

wherein Ar is a suitable aryl group, for example phenyl, and R⁶, m and B have any of the meanings defined hereinbefore except that any functional group is protected if necessary; or

(c) For compounds of the formula I wherein L is N(R⁸)C(O)-O-, the reaction of a compound of the formula II as defined above with a compound of the formula XI:

$$Lg^{1} O B$$

$$XI$$

wherein Lg¹ is a suitable displaceable group for example halogeno (such as fluoro, chloro or bromo) and R⁶, m and B have any of the meanings defined hereinbefore except that any functional group is protected if necessary; or

(d) For compounds of the formula I wherein L is N(R⁸)C(O)C(R^aR^b), the reaction of a compound of the formula II as defined above with a compound of the formula IX:



$$Lg^{2}$$

$$R^{b}$$

$$R^{b}$$

$$R^{b}$$

wherein Lg^2 is a suitable displaceable group for example hydroxy, halogeno (such as fluoro, chloro or bromo), R^x -C(O)-O- or R^x -O- (wherein R^x is a suitable alkyl or aryl group) and R^6 , R^a , R^b , m and B have any of the meanings defined hereinbefore except that any functional group is protected if necessary; or

(e) For compounds of the formula I wherein L is -N(R⁸)C(O)N(H)-, the reaction of a compound of the formula II as defined above with a trichloroacetylamine of the formula XIII:

wherein R⁶, m and B have any of the meanings defined hereinbefore except that any functional group is protected if necessary; or

(f) For compounds of the formula I wherein L is -C(R^aR^b)C(O)N(R⁹)-, the reaction of a compound of the formula XIV:

$$R^{4} \longrightarrow \begin{pmatrix} N = \begin{pmatrix} R^{5} \end{pmatrix}_{n} \\ R^{3} & R^{b} \end{pmatrix} \longrightarrow \begin{pmatrix} R^{a} & O \\ R^{b} & R^{b} \end{pmatrix}$$

wherein Lg^2 is a suitable displaceable group as described above and R^1 , R^2 , R^3 , R^4 , R^5 , R^a , R^b , n and A have any of the meanings defined hereinbefore except that any functional group is protected if necessary, with an amine of the formula XV:

$$\begin{array}{c}
H \\
R^9 \\
\end{array}
N$$

$$\begin{array}{c}
(R^6)_m \\
B
\end{array}$$



wherein R⁶, R⁹, m and B have any of the meanings defined hereinbefore except that any functional group is protected if necessary; or

(g) The reaction of a compound of the formula XVI:

$$R^{4} \longrightarrow \begin{pmatrix} Lg^{3} & & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & \\ & & & \\ & & & \\ & & \\ & & & \\ & & \\ & & & \\ & & \\ & & & \\ & & \\ & & &$$

wherein Lg³ is a suitable displaceable group for example halogeno (such as fluoro, chloro, bromo or iodo), methyl sulfonyl, methylthio or aryloxy (such as phenoxy) and R³, R⁴, R⁵, R⁶, n, m, A, B and L have any of the meanings defined hereinbefore except that any functional group is protected if necessary, with an amine of the formula HNR¹R², wherein R¹ and R² have any of the meanings defined hereinbefore except that any functional group is protected if necessary; or

(h) The reaction of a compound of the formula XVII:

$$Lg^{4} \xrightarrow{\left(R^{5}\right)_{n}} L \xrightarrow{\left(R^{6}\right)_{m}} XVII$$

wherein Lg^4 is a suitable displaceable group for example halogeno (such as chloro, bromo or iodo) or a sulfonyloxy group (such as trifluoromethylsulfonyloxy) and R^5 , R^6 , n, m, A, B and L have any of the meanings defined hereinbefore except that any functional group is protected if necessary, with an alkyne of the formula XVIII:

$$R^{4} \longrightarrow N = \bigvee_{N \longrightarrow R^{3}} NR^{1}R^{2}$$

XVIII

wherein R¹, R², R³ and R⁴ have any of the meanings defined hereinbefore except that any functional group is protected if necessary; or



(i) For compounds of the formula I wherein L is -N(H)C(O)N(R⁹)-, the reaction of an isocyanate of the formula XIX:

$$R^{4} \longrightarrow N = \begin{pmatrix} N & \begin{pmatrix} R^{5} \end{pmatrix}_{n} \\ N & & \\ R^{3} & \\ XIX \end{pmatrix} \longrightarrow N = 0$$

wherein R¹, R², R³, R⁴, R⁵, n and A have any of the meanings defined hereinbefore except that any functional group is protected if necessary, with an amine of the formula XV as defined above; or

(j) For compounds of the formula I wherein L is -N(H)C(O)N(R⁹)-, the reaction of a compound of the formula XX:

$$R^{4} \longrightarrow \begin{pmatrix} NR^{1}R^{2} & (R^{5})_{n} & O \\ A & N & H \end{pmatrix} O \longrightarrow Ar$$

wherein Ar is a suitable aryl group, for example phenyl, and R¹, R², R³, R⁴, R⁵, n and A have any of the meanings defined hereinbefore except that any functional group is protected if necessary, with an amine of the formula XV as defined above.

and thereafter if necessary:

- i) converting a compound of the Formula (I) into another compound of the Formula (I);
- ii) removing any protecting groups;
- iii) forming a salt.
- 16. (currently amended): A compound selected from Formulae II, XIV, XVI, XIX and -XX as defined in Claim 15 or a compound of Formula VIc:

$$R^{4} \longrightarrow \begin{pmatrix} N = \begin{pmatrix} Lg^{3} & (R^{5})_{n} \\ N = \begin{pmatrix} A \end{pmatrix} \end{pmatrix} NHR^{8}$$

VIc

or salt thereof, wherein Lg3Lg3, R3, R4, R5 and n are as defined in Claim 15.



- 17. (new): A method of inhibiting Tie2 receptor tyrosine kinase in a warm-blooded animal in need of such treatment, which comprises administering to said animal an effective amount of a compound of the formula I, or a pharmaceutically acceptable salt thereof, according to claim 1.
- 18. (new): A method for producing an anti-angiogenic effect in a warm-blooded animal in need of such treatment, which comprises administering to said animal an effective amount of a compound of the formula I, or a pharmaceutically acceptable salt thereof, as claimed in claim 1.